

The

Ballarat

Naturalist

July 2002



Lesser Long-eared
Bat
(Menkhorst)

Fauna Survey Methods

Speaker: Raymond Gibson, FNCV Fauna Survey Group

The Fauna Survey Group, a specialist section of the FNCV, was formed in 1959. Members search for fauna which are not easily seen because of their size, camouflage, nocturnal habits or shyness. With permits to trap, the group is active on weekends and public holidays, camping out in the bush. As well as day-to-day observations work is carried out for and on behalf of, for example, DNRE and the Victorian Wildlife Atlas, and often published in *The Victorian Naturalist*. Surveys may also be done for private property owners.

Using a comprehensive selection of slides Ray illustrated the methods of trapping and the creatures found by these methods. The images of the cute and furry mammals and marsupials were especially enjoyed by the audience.

Only small numbers of these small shy creatures are found compared to the numbers to be expected with bird counts. Wire cages and Elliott traps are set over a number of nights, baited with a mix of oatmeal, peanut butter and honey. Potoroos, antechinuses, bandicoots, bush rats, phascogales and pygmy possums can be caught in this way. They are weighed and measured before being released.

Bats are caught in harp traps, so-called because they consist of nylon filaments (fishing line) suspended from a frame, beneath which is a canvas bag into which the bats fall and seek shelter under a plastic flap. The traps are positioned along flight paths between trees, along tracks or near water. Again the bats are weighed and measured. The length of the forearm is diagnostic of subspecies. Sounds made by the bats have been recorded to produce sonograms.

Pitfall traps consist of buckets set into the ground at intervals along a drift net 50-60m long. Here mammals such as the Ningai, dunnarts and mice, reptiles, frogs and insects may be caught. As with the cage traps, cover in the form of vegetation is placed in the bottom to provide warmth and protection from predators.



Long-nosed Bandicoot
(Menkhorst)

Nestboxes attached to trees provide a way of surveying arboreal creatures. Accessing the boxes by ladder, the surveyor can remove the front of the box to check the contents. The entry hole must only be large enough for the target creature; even so Sugar Gliders and Brush-tailed Phascogales will use the same box. The nest created – and the scats – are diagnostic of the animal which has used the box e.g. phascogales' nests include strips of bark and feathers. Where there is a dearth of tree hollows, as in the northern part of Rushworth Forest where felling during the gold rush removed older trees, nestboxes have encouraged sugar gliders to breed.



Brush-tailed Phascogale
(Menkhorst)

One hindrance encountered in the group's work is the use of nestboxes by bees, which must be cleared out.

Surveys in the Black Range for the local Landcare Group produced Southern Brown Bandicoots, Yellow-footed Antechinus, and Sugar Gliders; in the Strathbogie Ranges where a drainage line had been fenced off for two years, rapid growth of Kangaroo Grass provided cover for the Long-nosed Bandicoot whose search for grubs and beetles left typical small holes in the ground.

We were shown various skinks, and other tiny mammals such as Smoky Mouse, Swamp Rat, antechinuses and dunnarts. Often these can be found by turning over rocks and stones or farm rubbish, a useful method when some creatures are trap-shy. Indirect observations include sighting chewed bark (done to release sap for food), scats and hearing noises.

Spotlighting and Stagwatching are valuable observational methods. A red filter over the light renders the beam nearly invisible to fauna and thus does not scare them away.

A "stag" is any tree, not necessarily dead, which contains hollows; sitting near such a tree and watching over a period of time, especially at dusk



Eastern Pygmy Possum
(Menkhorst)

in summer when nocturnal creatures emerge to feed, can be rewarding. Such surveys have been carried out for Leadbeater's possum, which weighs around 100gms and measure 30cms including the tail. Ray showed us flash photos of many nocturnal animals—the group has a library of images which members can call upon.

Editor.

Excursion: The Heinz Centre, Ballarat Grammar School

Leader: Phil Morrison, Director of Development

Current educational philosophy has identified the Year 9 age group as having special needs. Some schools have addressed this need by providing a separate location and a different educational experience. Ballarat Grammar School chose to establish a separate building in its existing grounds, a building demonstrating environmental sustainability with the students actively involved in the management and care of the systems which serve it. Officially opened in November of 2001, this is the second year of occupation.

Phil Morrison (grandson of Crosbie Morrison) enlarged on the nature of the student timetable, explaining: the integration of subjects rather than separating the disciplines; the periods of time that each group of students spend out in the community; the outdoor education with abseiling/rockclimbing in the Grampians, snowcamping/cross-country skiing at Mt. Stirling; and a 3-week period in Melbourne becoming streetwise where students develop confidence in city living.

Of particular interest to us was the operation of the building's systems. Passive energy systems reduce dependence on finite resources. Rammed earth walls and concrete flooring store heat and radiate it long after direct sunlight has gone. Supporting timbers are recycled from a pier and jarrah floors came from old woolstores.

Rainwater is collected from the roof for use within the centre, heated by a solar hot water unit. The lagoon serves a number of purposes, including flood mitigation, wetland studies (vegetation has been planted and wood ducks, yabbies and birds are already using it) and a means of cooling air which then passes into the centre in summer as hot air is vented through windows high up in the building. Double glazing prevents excessive loss of heat in winter.

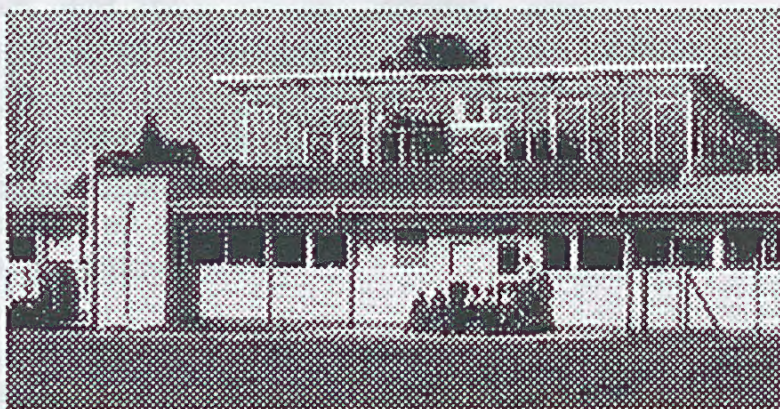
Sewage is treated by a worm farm; after digestion the effluent is treated with



East side of the Heinz Centre with rammed earth walls on either side and lagoon in foreground.

electrofloculation which collects the solids and they are skimmed off. The water is pumped up to the roof for further treatment with UV light and is then used for toilet flushing again. Reedbeds remove nutrients from the water.

Solar power generated by the 64 photovoltaic cells and the wind turbine is fed into the grid and the power company credits the school for that power. During termtime the school does need extra power from the grid but over holiday periods when the building is little used, the surplus flows back into the grid. When extra heating is necessary gas-fired and wood-fired boilers are used to supplement the passive energy sources.



North side of the Heinz Centre showing solar panels, solar hot water unit and double-glazed windows.

Room lighting is controlled by sensors so that power is not wasted; computers monitor the energy flow and screens are located where students can see what's happening.

On the north side of the building permaculture 'no dig' plots are being developed; a chook dome houses hens which eat weeds, churn up the ground and manure it, thus preparing it for agriculture and horticulture—an outdoor classroom which will also link in with senior agriculture studies. Plant propagation is envisaged; many native plants and shrubs have been installed for aesthetic reasons as well as habitat, carbon dioxide reduction, provision of fuel and watertable control.

The centre is still very much a "work in progress"; however the students are imbued with a real sense of sustainable living and should take this with them when they emerge into the wider community.



Celia Rosser
The Banksias
Volume III
at
Ballarat Grammar School

On this Queen's Birthday weekend, in the Heinz Centre, the school chose to exhibit a set of prints from Celia Rosser's third volume of *The Banksias*. They looked splendid against the earthy tones of the rammed earth walls, a most sympathetic setting which impressed Mrs. Rosser considerably when she arrived for the opening of the exhibition on Friday June 7th. An unassuming lady, she gave a brief description of how she came to be a botanical artist, illustrating her talk with humorous anecdotes.

In 1974 she was appointed by Monash as the University Botanical Artist and commissioned to paint the entire genus *Banksia* with an accompanying monograph by A. S. George. Each species took 10-12 weeks to complete. Vol. 1 was published in 1981, Vol. 2 in 1984 and Vol. 3 in 2000. Since the decision to publish in 1974, four new species of *Banksia* have been discovered. The total number of plates over the three volumes is seventy-six. The original watercolours are part of the Monash University Art Collection.

FNCB members were able to view the exhibition as part of the excursion, and the 20 people who came found the whole experience fascinating, not least because of the infectious enthusiasm of Phil Morrison and staff member Alan Ford. It is a clear demonstration that alternative energy generation, waste and water recycling and effective re-use of building materials can be incorporated in community buildings. As such it attracts frequent visitors, from both educational and non-educational walks of life.

Editor .

June Meeting Points

- 30 members and visitors were welcomed.
- Victorian Naturalist: Bound copies of Victorian Naturalist 1884-1984, donated by Alison and Maurie Pilmore have been permanently loaned to Ballarat Branch of Central Highlands Regional Library.
- Hats and Badges: Members asked to complete order form.
- *Discovering Ballarat's Bushland*: Proofs from printer have been checked and returned.
- Campout October 2002: Volunteers required for jobs and requested to fill in sheet.
- Club Campout 2003: Suggestions sought for suitable venues. An extended camp to Lake Mungo was suggested.

Show and Tell.

- Carol Hall: Photograph of bird netting cages over plants in North Gardens Wetland to protect plants from grazing by birds.
- Brochures on Ballarat Grammar School Environment Centre and Celia Rosser Banksia prints display.
- Eileen Anderson: During restoration work on the Mechanics Institute, alternative nest sites will be provided for the Peregrine Falcon.

Field Reports

- Carol Hall: At Lake Corangamite pair of Cape Barren Geese, 10 White-faced Heron at regular intervals along a 150m stretch. At North Gardens Wetland, 20 Wood Duck, 4 Hoary-headed Grebe, 2 White-faced Heron, 10 Black-tailed Native Hens and usual collection of Black Swans, Coots and Black Duck. Galahs and Eastern Rosellas perching in dead tree, 3 Little Pied and 3 Little Black Cormorants actively fishing.
- Belinda Taylor: Immature Pink Robin passing through Haddon garden.
- Ken McDonnell: Great Egret on St George's Lake.
- Kay Preston: 2 injured swans at Lake Wendouree. DNRE Wildlife Officer Jim O'Brien notified and attended.
- Claire Dalman: Brushtail Possum seen on road at night. Many have been killed.

Interlude

Some of you may remember Flanders and Swann, whose songs, written in the late '50s and early '60s reflected their keen observation of human idiosyncrasies (I never did care for music much—it's the high fidelity), the habits of various creatures (Mud, mud, glorious mud....) and of plants; in the light of GM crops and other genetic engineering readers might like to peruse in full the following:

Misalliance

The fragrant honeysuckle spirals clockwise to the sun
And many other creepers do the same.
But some climb anti-clockwise—the bindweed does, for one -
Or Convolvulus to give her proper name.

Rooted on either side o'door, one of each species grew
And they raced towards the window ledge above;
Each corkscrewed to the lintel in the only way it knew
Where they stopped, touched tendrils, smiled and fell in love.

Said the right-handed honeysuckle to the left-handed bindweed
"Oh let us get married if our parents don't mind;
We'd be loving and inseparable, inextricably entwined,
We'd live happily ever after," said the honeysuckle to the bindweed.

To the honeysuckle's parents it came as a shock
The bindweed's they cried "Oh inferior stock—
They're uncultivated, of breeding bereft:
WE twine to the right and THEY twine to the left."

Said the anti-clockwise bindweed to the clockwise honeysuckle,
"We'd better start saving, many a mickle makes a muckle;"
They'd run away for a honeymoon and "hope that our luck'll
Take a turn for the better," said the bindweed to the honeysuckle.

A bee who was passing remarked to them then,
"I've said it before and I'll say it again,
Consider your offshoots— if offshoots there be—
They'll never receive any blessing from me"

Poor little sucker, how will it learn
When it is climbing, which way to turn?
Right, left, what a disgrace
For it may grow straight up and fall flat on its face.

Said the right-hand thread honeysuckle to the left-hand thread bindweed,
"It seems that against us all fate has combined;
Oh my darling, oh my darling, oh my darling Columbine,
Thou art lost and gone forever, we shall never intertwine."

Together they found them the very next day,
They had picked up their roots and just shrivelled away,
Deprived of that freedom for which we must fight,
To veer to the left or to veer to the right.

Information and Registration Forms for the VFNCA Camp
in Ballarat on October 25-27 are now available.

Calendar

July

- Fri. 5 Meeting: *Volunteers for Rare Plant Monitoring* - Andy Arnold.
Sun. 7 Excursion: *Significant Trees around Ballarat* - Pat & Bill Murphy.
Tues. 23 Committee Meeting @ John Gregurke's, 7.30pm.

August

- Fri. 2 Meeting: *Lichens* with Dr. Kathleen Ralston
Sat. 3 Excursion: *Lichens in the Field* with Kathleen Ralston

Supper Duty

August:

September: Stella Bedggood Lecture - Committee Members

October:

Committee

President Mrs. Carol Hall
Vice-President Mr. Greg Binns
Secretary Mr. John Gregurke
Treasurer Mr. Bob Curtain

Miss Helen Burgess.....
Miss Maureen Christie.....
Mrs. Claire Dalman.....
Mrs. Carol Hall (Editor).....

Mr. Les Hanrahan.....
Mr. John Mildren.....
Mrs. Kay Preston.....

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Website: www.ballarat.yourguide.com.au Click on *Local Info*. Search *Environment*.

Meetings are held at the Ballarat Horticulture Centre, cnr. Gregory & Gillies Sts (VicRoads 254 F8) on the first Friday of the month at 7.30pm.

Excursions: Depart from Creswick Plaza, Creswick Rd., Ballarat (VicRoads 255 M10) at 9.30 am unless otherwise specified.

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